

## ABSTRACT OF THE DISCLOSURE

A system and method for automatically orienting a spherical object using a reference indicium on the spherical object so that a target point, which has a predetermined spatial relationship with the reference indicium, is prepositioned for further processing, includes means for and the steps of locating and defining a position and two-dimensional orientation of the reference indicium on the spherical object, calculating, based on the defined position and two-dimensional orientation of the reference indicium, predetermined angles of rotation for the spherical object to move the reference indicium from the defined position and two-dimensional orientation to the predetermined final position and two-dimensional orientation, rotating the spherical object at a first orienting work station through one of the predetermined angles of rotation to move the reference indicium from the predefined position and two-dimensional orientation to a first reference position and orientation at the first orienting work station, conveying the spherical object from the first orienting work station to a second orienting work station in a manner such that the spherical object is rotated through a single-degree of freedom by 90 degrees wherein the reference indicium is at a second reference position and two-dimensional orientation at the second orienting work station, rotating the spherical object at the second orienting work station through another of the predetermined angles of rotation to move the reference indicium from the second reference position and two-dimensional orientation to a third reference position and two-dimensional orientation at the second orienting work station, conveying the spherical object from the second orienting work station to a third orienting work station in a manner such that the spherical object is rotated through a single-degree of freedom by 90 degrees wherein the reference indicium is at a fourth reference position and two-dimensional orientation at the third orienting work station, and rotating the spherical object at the third orienting work station through yet another of the predetermined angles of rotation to move the reference indicium from the fourth reference position and two-dimensional orientation to the predetermined final position and two-dimensional orientation at the third orienting work station wherein the target point is prepositioned for further processing.

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